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METHODS AND SYSTEMS FOR DETERMINING ROLL

RATES OF LOANS

AMENDMENT AFTER FINAL

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Hon. Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Applicant respectfully requests consideration and entry of the following amendment submitted in response to the Office Action dated July 14, 2003 and made final.

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1. (currently amended) A method for determining roll rates for a group of <u>non-stationary</u> <u>asset-based</u> loans, <u>the group of non-stationary asset-based loans included within a distressed loan portfolio</u>, said method comprising the steps of:

utilizing a collections model to predict a payment behavior for a borrower of a non-stationary asset-based loan included within a distressed loan portfolio, the collections model is based on historical payment information of the borrower and a plurality of collection strategies that may be utilized for collecting payment from the borrower, non-stationary asset based loans include at least one of automobile loans, vehicle loans, and credit card loans;

initiating at least one of the plurality of collection strategies with respect to the borrower; analyzing the borrower's payment behavior after initiating the at least one collection

strategy;

comparing the borrower's payment behavior after initiating the at least one collection strategy to the predicted payment behavior of the borrower;

utilizing a re-marketing model to calculate an amount generated and expenses incurred from repossessing the non-stationary asset used as collateral for the borrower's loan, the remarketing model further calculates a probability that an event will occur impacting payment of the borrower's loan;

generating delinquency moving matrices for the group of loans <u>including the borrower's</u> loan; and

calculating a probability that an event will occur impacting payment of at least one account within the group of loans; and

predicting a roll rate into a next level of delinquency for each loan in the group of loans based upon a payment history of each account in the group of loans loan including the payment behavior after initiating the at least one collection strategy and based upon the calculated event probability re-marketing model calculations.



- 2. (original) A method according to Claim 1 wherein said step of predicting a roll rate into a next level of delinquency further comprises the step of determining estimates with respect to payments.
- 3. (original) A method according to Claim 1 wherein said step of generating delinquency moving matrices further comprises the step of assigning probability distributions to loan delinquency assumptions.
- 4. (currently amended) A method according to Claim 1 wherein said step of predicting a roll rate into a next level of delinquency further comprises the step of analyzing accounts loans that roll forward into a next period of delinquency, due to non-payment.
- 5. (currently amended) A method according to Claim 4 wherein said step of looking only at accounts analyzing loans that roll forward into a next period of delinquency further comprises the step of calculating a delinquency value that has increased from a first period to a second period.
- 6. (currently amended) A method according to Claim 1 wherein said step of predicting a roll rate into a next level of delinquency further comprises the step of analyzing accounts loans that roll back one or more periods of delinquency, due to extra received payment.
- 7. (currently amended) A system for determining a roll rate of a <u>distressed</u> loan portfolio <u>including non-stationary asset based loans</u>, said system comprising:

at least one computer;

a server configured with a roll rate determination model <u>including a collections model</u> and a re-marketing model, said server configured to:

access the collections model to predict a payment behavior for a borrower of a non-stationary asset based loan included within the distressed loan portfolio, the collections model is based on historical payment information of the borrower and a plurality of collection strategies that may be utilized for collecting payment



from the borrower, non-stationary asset based loans include at least one of automobile loans, vehicle loans, and credit card loans;

analyze the borrower's payment behavior after initiating at least one of the plurality of collection strategies;

compare the borrower's payment behavior after initiating the at least one collection strategy to the predicted payment behavior of the borrower;

access a re-marketing model to calculate an amount generated and expenses incurred from repossessing the non-stationary asset used as collateral for the borrower's loan, the re-marketing model further calculates a probability that an event will occur impacting payment of the borrower's loan;

generate delinquency moving matrices for the loan portfolio including the borrower's loan; and

calculate a probability that an event will occur impacting payment of at least one account within a group of loans; and

predict which accounts loans in the loan portfolio that will roll forward into a next classification of delinquency based upon a payment history of each account in the group of loans loan including the payment behavior of a borrower after initiating the at least one collection strategy and based upon the calculated event probability re-marketing model calculations; and

a network connecting said computer to said server.

- 8. (original) A system according to Claim 7 wherein said server configured to determine estimates with respect to payments.
- 9. (original) A system according to Claim 7 wherein said server configured to assign probability distributions to loan delinquency assumptions.



- 10. (currently amended) A system according to Claim 7 wherein said server is configured to analyze the accounts loans that roll forward into a next period of delinquency, due to non-payment.
- 11. (currently amended) A system according to Claim 10 wherein said server is configured to calculate a delinquency value that has increased from a first period to a second period for the accounts loans that roll forward into the next period of delinquency.
- 12. (currently amended) A system according to Claim 7 wherein said server is configured to analyze the accounts loans that roll back one or more periods of delinquency, due to extra received payment.
- 13. (currently amended) A system according to Claim 7 wherein said server is configured to predict the accounts loans that will roll forward into an n-month delinquency, wherein n is an integer greater than zero and represents a number of months for which one of the customers has been delinquent in making a payment.
- 14. (original) A system according to Claim 7 wherein said network is at least one of a WAN or a LAN.
- 15. (currently amended) A computer for determining a roll rate of a <u>distressed</u> loan portfolio including non-stationary asset-based loans, said computer programmed to:

access a collections model to predict a payment behavior for a borrower of a nonstationary asset-based loan included within the distressed loan portfolio, the collections model is based on historical payment information of the borrower and a plurality of collection strategies that may be utilized for collecting payment from the borrower, non-stationary asset based loans include at least one of automobile loans, vehicle loans, and credit card loans;

analyze the borrower's payment behavior after initiating at least one of the plurality of collection strategies;

compare the borrower's payment behavior after initiating the at least one collection strategy to the predicted payment behavior of the borrower;



calculate using a re-marketing model an amount generated and expenses incurred from repossessing the non-stationary asset used as collateral for the borrower's loan, the re-marketing model further calculates a probability that an event will occur impacting payment of the borrower's loan;

generate delinquency moving matrices <u>for the loan portfolio including the borrower's</u> <u>loan; and</u>

calculate a probability that an event will occur impacting payment of at least one account within a group of loans; and

predict which accounts loans in the portfolio that will roll forward into a next classification of delinquency based upon a payment history of each account in the group of loans loan including the payment behavior of a borrower after initiating the at least one collection strategy and based upon the ealculated event probability re-marketing model calculations.

- 16. (original) A computer according to Claim 15 programmed to determine estimates with respect to payments.
- 17. (original) A computer according to Claim 15 programmed to assign probability distributions to loan delinquency assumptions.
- 18. (currently amended) A computer according to Claim 15 wherein said computer is programmed to analyze the accounts loans that roll forward into a next period of delinquency, due to non-payment.
- 19. (currently amended) A computer according to Claim 18 wherein said computer is programmed to calculate a delinquency value that has increased from a first period to a second period for the accounts loans that roll forward into a next period of delinquency.
- 20. (currently amended) A computer according to Claim 15 wherein said computer is programmed to analyze the accounts loans that roll back one or more periods of delinquency, due to extra received payment.



- 21. (currently amended) A computer according to Claim 15 wherein said computer is programmed to predict the accounts <u>loans</u> that will roll forward into an n-month delinquency, wherein n is an integer greater than zero and represents a number of months for which one of the customers has been delinquent in making a payment.
- 22. (currently amended) A method according to Claim 1 wherein said step of predicting a roll rate further comprises predicting the accounts loans in the group of loans that will be rolled forward into an n-month delinquency, wherein n is an integer greater than zero and represents a number of months for which one of the customers has been delinquent in making a payment.
- 23. (currently amended) A method according to Claim 1 wherein said step of ealeulating a probability utilizing a re-marketing model further comprises utilizing a re-marketing model to calculate ealeulating a probability that an event will occur impacting payment of at least one account loan within the group of loans wherein the event includes at least one of a change in political climate, an increase in interest rate, and a natural disaster.
- 24. (previously presented) A system according to Claim 7 wherein the event includes at least one of a change in political climate, an increase in interest rate, and a natural disaster.
- 25. (previously presented) A computer according to Claim 15 wherein the event includes at least one of a change in political climate, an increase in interest rate, and a natural disaster.
- 26. (new) A method according to Claim 1 wherein utilizing a collections model to predict a payment behavior for a borrower further comprises utilizing a collections model that is based on historical payment information of the borrower, wherein the historical payment information of the borrower includes information relating to the payment of the loan by the borrower for a period of no more than six-months prior to a last payment due date of the loan.
- 27. (new) A method according to Claim 1 further comprising the step of initiating another collection strategy with respect to the borrower when after initiating the at least one of the plurality of collection strategies the borrower's payment behavior does not correspond with the borrower's predicted payment behavior.





- 28. (new) A system according to Claim 7 wherein the historical payment information of the borrower includes information relating to the payment of the loan by the borrower for a period of no more than six-months prior to a last payment due date of the loan.
- 29. (new) A system according to Claim 7 wherein said server is configured to prompt a user to initiate another collection strategy with respect to the borrower when after initiating the at least one of the plurality of collection strategies the borrower's payment behavior does not correspond with the borrower's predicted payment behavior.
- 30. (new) A computer according to Claim 15 wherein the historical payment information of the borrower includes information relating to the payment of the loan by the borrower for a period of no more than six-months prior to a last payment due date of the loan.
- 31. (new) A computer according to Claim 15 wherein said computer is programmed to prompt a user to initiate another collection strategy with respect to the borrower when after initiating the at least one of the plurality of collection strategies the borrower's payment behavior does not correspond with the borrower's predicted payment behavior.

